

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for forming a vertical ferrocapacitor ~~includes the steps of comprising:~~

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in it;

depositing an electrode layer into the openings formed in the ferroelectric layer;

a second etching step, after depositing the electrode layer, of etching to remove the electrode layer and the insulating layer at the bottom of the openings ~~to form gaps in~~ it; and

inserting conductive material into the gaps.

2. (Currently amended) A method according to claim 1 in which the first etching step leaves a film of ferroelectric material remaining at the bottom of the openings, and the film of ferroelectric material is removed during the second etching step.

3. (Currently amended) A method according to claim 1 ~~including a step of~~ further comprising planarizing to form a flat upper surface on the remaining ferroelectric material to a planarization level and depositing an insulating layer over it, after inserting the conductive material.

4. (Currently amended) A method according to claim ~~[[1]]~~ 3 in which the conductive material substantially fills the openings at least up to the planarization level.

5. (Withdrawn) A ferroelectric capacitor produced by a method according to claim 1.

6. (Withdrawn) A FeRAM device including a ferrocapacitor produced by a method according to claim 1.

7. (Previously presented) A method for forming a ferrocapacitor including the steps of:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in it, depositing an electrode layer into the openings formed in the ferroelectric layer in which the

first etching step leaves a film of ferroelectric material remaining at the bottom of the openings;

a second etching step, after depositing the electrode layer, of etching the insulating layer at the bottom of the openings to form gaps in it and to remove the film of ferroelectric material; and

inserting conductive material into the gaps.

8. (New) A method according to claim 1 wherein the electrode layer has a thickness in the range of 15nm to 20 nm.

9. (New) A method according to claim 1 wherein the insulating layer is Al_2O_3 .

10. (New) A method according to claim 1 wherein the ferroelectric material is PZT.

11. (New) A method according to claim 1 wherein the electrode layer contains iridium.

12. (New) A method according to claim 1 wherein the conductive material contains iridium.

13. (New) A method for forming a ferrocapacitor includes the steps of:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in it leaving a film of ferroelectric material remaining at the bottom of the openings;

depositing an electrode layer into the openings formed in the ferroelectric layer;

a second etching step, after depositing the electrode layer, of etching the film of the ferroelectric material and the insulating layer at the bottom of the openings to form gaps in it; and

inserting conductive material into the gaps.